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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/282,145	03/31/1999	GERD SCHOENWOLF	P98.2881	8232

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EXAMINER

CORRIELUS, JEAN M

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 02/03/2004

24

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/282,145

Applicant(s)

SCHOENWOLF ET AL.

Examiner

Jean M Corrielus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 13 and 16 is/are rejected.
- 7) ☒ Claim(s) 10 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

1. This office action is in response to the amendment filed on November 10, 2003, in which claims 1-13 and 16 are presented for further examination.

Response to Arguments

2. Applicant's arguments filed 11/10/03 have been fully considered but they are not persuasive. (See examiner's remark section).

Priority

3. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 19819205.3, filed on 04/29/1998, which papers have been placed of record in the file.

Claim Rejections - 35 U.S.C. § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was

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commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-2, 4-9, 11, 13 and 16 as best understood by the examiner are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al US Patent no.6,301,582.

As to claim 1, Johnson discloses “a database for storing persistent data” as a two level storage system persistent data (col.2, lines 17-18); “a buffer into which is written all data to be permanently stored”(as a shared persistent virtual storage (item 190) which includes a virtual storage manager (item 208); virtual address translator (item 210), wherein said virtual address (201) comprises a hasher, hash table and a lookaside buffers; page cache (item 212); and pager (item 214) (see fig.2); “a permanent memory connected to the buffer, the permanent memory having at least first and second storage units, into which the persistent data is alternately written” as a data storage (206) connected to the shared persistent virtual storage (item 190) having at least two storage area ((Backing store)1 and (Backing store)2) into which the persistent data is alternately written (see fig.2), each storage (Backing store) unit being structured to store a complete permanent configuration for a characteristic (hasher, page cache and pager). Applicant should duly note that the lookaside buffer disclosed by Johnson does not directly connected to the permanent memory (data storage item 206 of fig.6). However, such a data storage of Johnson is connected to the share persistent virtual storage (item

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190 of fig.2), which contains a lookaside buffer, wherein said lookaside buffer is connected to the data storage through the use of the shared persistent virtual storage. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Johnson's system, wherein the lookaside buffer provided therein (see Johnson's fig.2) would directly connected to the data storage in order to alternately transfer data from a first storage unit to a second storage unit, thereby facilitating faster access. In addition, Johnson discloses that each storage unit being structured to store a complete permanent configuration function by simply copying the persistent object from backing store when is needed (col.7, lines 27-34). It is important to note that the claim language only requires at least one of the following: (a) function, (b) characteristics and (c) a hardware implementation to be satisfied. The file system disclosed by Johnson contains general knowledge of the organization of the data stored on storage devices, wherein such memories and disks needed to implement properties and performance of a desired storage architecture. Notably, there is an expectancy that the data stored on the file system will be preserved until explicitly removed. Therefore, persistency with respect to the storage of content is paramount to other properties and performance metrics such as organization of, and speed of access to, the to stored content. Such of these characteristics of a file system are not generally suited to the access and volatility characteristics of a cache system, wherein a cache object is characterized as a collection of data that is persistent over a predetermined period of time but that can be recovered if lost, such a novel object cache store to provide fast and efficient storage of data as cache objects.

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As to claim 2, Johnson discloses the claimed “wherein the data base further comprises a control mechanism within a first application process for management of a first memory controls writing of the data to be persistently stored into the buffer, the data being generated or modified by the first application process alone or also by other application, processes running simultaneously with the first application process” (col.7, lines 10-32).

As to claim 4, Johnson substantially discloses the invention as claimed, including the recited “wherein all of the persistent data stored in the buffer is alternately written into one of the storage units or storage areas of the permanent memory” (col.2, lines 18-24).

As to claim 5, Johnson substantially discloses the invention as claimed, including the recited “wherein only modified data sequences are alternately written into storage segments of the permanent memory” (col.2, lines 18-24).

As to claim 6, Johnson substantially discloses the invention as claimed, including the recited “wherein the modified data sequences are written into the storage segments of the permanent memory at predetermined time intervals” (col.2, lines 18-24).

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As to claim 7, Johnson substantially discloses the invention as claimed, including the recited “wherein the modified data sequences are written into the storage segments of the permanent memory after a predetermined number of modifications” (col.2, lines 18-24).

As to claim 8, Johnson discloses the claimed “wherein only the persistent data, if necessary including reconstruction data, is transferred into the buffer from a first memory which contains a run-time program and associated permanent data” (col.2, lines 30-33).

As to claim 9, Johnson discloses the claimed “wherein the persistent data is stored in a space-saving manner as a data sequence in the buffer and in the permanent memory” (col.5, lines 1-4).

As to claims 11, Johnson substantially discloses the invention as claimed including the recited “wherein if construction data which is useable for reconstruction is present in the buffer, the configuration data to be written into a first memory is automatically recovered from the reconstruction data stored in the buffer” (col.6, lines 19-27).

As to claim 13, Johnson does not explicitly disclose a loadable Flash Erasable Programmable Read Only Memory chip. It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement Johnson’ system, including a loadable Flash Erasable Programmable Read Only Memory chip. This motivation would have been to allow Johnson’s

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permanent memory to stay stable for long periods without electricity while still allowing reprogramming.

As to claim 16, Johnson discloses the claimed “wherein a number of configuration changes are only performed at a data management side and thereafter at least one of a functional and a hardware change comprising all configuration changes is performed in the terminal” as a means wherein Java compiler compiles programs written in Java which is platform independent commands that can be interpreted and run by JVM, which must be implemented for each platform on which the Java program must be run (col.7, lines 65-col.8, line 6).

Allowable Subject Matter

6. Claim 3 is allowable over the prior art made of record.
7. Claims 10 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Remark

- (A). Applicants asserted that Johnson does not suggest or teach all of the claimed elements. The examiner disagrees with the precedent assertion. It is noted that Johnson discloses substantially the

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invention as broadly claimed. The examiner has provided a mapping correspondence as to where each limitation is met in the prior art. Applicant has failed to show where each limitation of the claim is disclosed in the drawing. The law is required that each limitation of the claim must describe in the drawing or in the preferred embodiments of the invention. Since applicants fail to show how the language of the claim describes in the specification, the aforementioned assertion is, therefore, moot.

(B). Applicant asserted that there is not teaching or suggestion that persistent data is actually written persistent data thereby arrive at the claimed features. The examiner disagrees with this assertion. The claims do not capture the essence of the invention as argued in applicant's remark page 6. Applicant failed to rebut the Examiner's prima facie case for obviousness by failing to address the correspondences drawn between the prior art and Applicants' claimed subject matter. In paper number 4, the Examiner went through the claims phrase by phrase and referred to the prior art column and line number as to where he has drawn the correspondences between Applicants' claim phrases and prior art. By failing to address these correspondences, Applicants have failed to rebut the Examiner's prima facie case of obviousness uses for a different purpose which does not alter the conclusion that its use in a prior art device would be prima facie obvious from the purpose disclosed in the reference. It is important to note that the file system disclosed by Johnson contains general knowledge of the organization of the data stored on storage devices, wherein such memories and disks needed to implement properties and performance of a desired storage architecture. Notably, there is an expectancy that the data stored on the file system will be preserved until explicitly removed. Therefore, persistency with respect to the storage of content is paramount to other properties and

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THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or early communication from the Examiner should be directed to **Jean Corrielus** whose telephone number is (703) 306-3035. The Examiner can normally be reached on the weekdays from 7:00am to 5:30pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, **Kim Vu**, can be reached on (703)305-9343.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C. 20231 or faxed to:

(703) 872-9306, (for formal communications intended for entry)

Or:

(703) 872-9306 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to **Crystal Park II, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).**



Jean M. Corrielus

Patent Examiner

January 23, 2004